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EXAMINER
YANG, CLARA I

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 February 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-23,26-37,39 and 40</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _____ is/are rejected.

7)☒ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 February 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed on 9 February 2004 regarding claims 1 - 6, 9, 10, 16, 26 - 28, 39, and 40 have been fully considered but they are not persuasive. On pages 15 - 17, the applicant argues that Allport's remote control 10 is unable to transmit signals to and receive signals from a controlled appliance. However, in Col. 23, lines 3 - 10, Allport teaches that remote control 10 cycles through a series of infrared (IR) command libraries when a new appliance is to be controlled. The cycling comprises of remote control 10 selecting a library, sending an IR command associated with the selected library to the appliance, determining if the appliance responded to the IR command, and either automatically stopping the cycle if the appliance communicates back to remote control 10 or continuing on to test the next library in the same manner if the appliance fails to respond. Consequently, Allport's remote control 10 is capable of bi-directional communication with a controlled apparatus. In addition, Allport's remote control 10 includes the option of saving the current settings onto another remote control (see Col. 23, lines 13 - 19). Because Allport's remote control 10 has IrDA port 645 (see Fig. 18) for wireless communication and remote control having the ability to communicate with each other is well known, it is understood that the first remote control 10 sends its current settings to a second remote control 10 via IR signals and that the second remote control 10 is also able to transmit data to the first remote control 10 via IR signals.

Specification

2.   The abstract of the disclosure is objected to because the maximum word length of 150 words has been exceeded. Correction is required. See MPEP § 608.01(b).

Claim Objections

3.   Claims 1 and 40 are objected to because of the following informalities:

♦ Claim 1, bottom of page 3: Change "and receiving from each other" to "and a receiving means for receiving a signal from each other" since a transmitter only transmits signals.

♦ Claim 40, last limitation: Change "and receiving from" to "and a receiving means for receiving a signal from". In addition, "controllable" is misspelled.

Appropriate correction is required.

4.   Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 13 calls for a thermostat and remote control apparatus according to claim 1 that is able to communicate with a second thermostat and remote control apparatus. Claim 1, however, already requires that each thermostat and remote control device include a transmitting means for transmitting a signal to and a receiving means for receiving a signal from each other and a controlled item.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 39 and 40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 39, as amended, requires a remote control apparatus that is able to receive signal from a device that is able to control the controllable remote control apparatus. The applicant only teaches that remote control apparatus 10 can (1) control a plurality of devices (see Fig. 4; page 10, lines 3 - 19; page 13, lines 25 - 26; and page 14, lines 1 - 22), (2) communicate via IR and RF with other remote control apparatuses 10 (see page 14, lines 23 - 25); and (3) receive status information from the controlled devices (see page 15, lines 4 - 9 and page 20, lines 6 - 9). Because the applicant omits teaching a remote control apparatus that is controllable either by another remote control apparatus or by a controlled a device, the examiner interprets the last limitation of the claim to be "a transmitting means for transmitting a signal to and a receiving means for receiving a signal from at least one item that is controlled by the remote control apparatus."

Claim 40, as amended, calls for a controllable thermostat having all the components of the remote control apparatus required in claim 1. However, as illustrated in Fig. 4 and disclosed on page 14, lines 13 - 21, the applicant only teaches that controllable thermostat 260 controls devices for a user's heating and air conditioning equipment and has a radio frequency (RF) transmitter and receiver for communicating with remote control apparatus 10's RF transmitter and receiver. Hence, the examiner interprets the claim to call for a controllable thermostat that includes a transceiver for transmitting a signal to and receiving a signal from a remote control apparatus.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

8.   Claim 39 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No.

6,104,334.

Allport teaches a remote control 10, as shown in Figs. 2 and 18, comprises: (a) a housing;

(b) graphical display 85 or interface that has programmable buttons (see Col. 12, lines 13 – 16);

(c) a plurality of icons 200a, 205a, 210a, and 215a on graphical display 85 that correspond to a set

of controls for devices that are controlled by remote control 10 (see Col. 13, lines 49 – 55 and Col.

15, lines 5 – 11); (d) graphical display 85 or display screen; (e) "clear" button 130 (see Fig. 6 and

Col. 15, lines 44 – 51); (f) a Universal Serial Bus (USB) port 635 (see Col. 4, lines 47 – 52; Col. 5,

lines 39 – 42 and 50 - 59; and Col. 27, lines 53 – 59); (g) central processing unit (CPU) 605 (see

Col. 27, lines 9 – 17); (h) a Universal Asynchronous Receiver/Transmitter (UART) 675 for

performing parallel-to-serial and serial-to-parallel conversions (see Col. 27, lines 40 –42); and (i)

control infrared (IR) port 640 for transmitting IR commands to a controlled device (see Col. 27,

lines 42 – 44). Allport discloses that a new IR command library for the must be loaded into the

memory of remote control 10 when a new device is to be controlled by remote control 10 (see

Col. 22, lines 19 – 31). If a plurality of IR command libraries is already loaded in remote control

10, the consumer actuates one button on remote control 10, which causes remote control 10 to

begin cycling through the series of IR command libraries (see Col. 22, lines 66 – 67 and Col. 23,

lines 1 - 2). The cycling comprises selecting a library, sending an IR command associated with

the selected library to the device, determining if the device responded to the IR command, and

either automatically stopping the cycle if the device communicates back to remote control 10 or

continuing on to test the next library in the same manner if the device fails to respond (see Col.

23, lines 3 - 10); thus Allport's remote control 10 has both a transmitting means a for

transmitting a signal to and a receiving means for receiving a signal from a controlled device.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11.   Claims 1 - 6, 10, 13, 14, 17, 18, 20 - 23, 33, and 39 are rejected under 35 U.S.C. 103(a) as

being unpatentable over U.S. Patent No. 4,918,439 (Wozniak et al.) in view of U.S. Patent No.

6,104,334 (Allport) and U.S. Patent No. 6,297,746 (Nakazawa et al.).

Referring to Claims 1, 13, 14, and 39, Wozniak's remote control device 10, as shown in Fig. 1b, comprises: (a) a housing; (b) buttons 11 and 13 or interface; (c) a plurality of icons on buttons 11 and 13 that correspond to a set of controls for items that are controlled by device 10 (see Fig. 9; Col. 3, lines 37 – 42; Col. 12, lines 4 – 57; Col. 13, lines 28 – 68; Col. 14, lines 1 – 68; and Col. 15, lines 1 – 68); (d) liquid crystal display (LCD) 14 showing current time and date (see Col. 3, lines 43 – 50); (e) recessed key 13*i* (En) or program and enter button (see Col. 2, lines 29 – 33 and Col. 12, lines 25 – 28); (f) button 13*d* or clear button for deleting a program being stored during the learning mode (see Col. 16, lines 3 – 8); (g) microprocessor U1 (see Figs. 7*a* to 7*f* and Col. 5, lines 44 – 47); (h) connector 27 for connecting device 10 via transducer 18 to cradle 25, which communicates with other devices, such as home computer 22 (see Figs. 3, 4*b*, and 4*c*; Col. 7, lines 65 – 68; and Col. 9, lines 3 – 6); (i) transducer module 18 for controlling appliances that IR signals (see Figs. 2 and 3; and Col. 7, lines 38 – 59); and (j) an electric cradle 25 (see Fig. 4a). As indicated by Fig. 11 and Col. 3, lines 23 – 32, Wozniak's device 10 is able to control thermostats. Wozniak discloses that device 10 provides status information and permits a user to monitor instructions in the timer program (see Col. 3, lines 43 – 45 and Col. 17, lines 16 – 19); thus, in addition to the current time and day of the week, device 10 is able to display the current temperature setting. Wozniak omits teaching the following: (1) device 10 having a USB port, a plurality of serial or parallel ports for connecting a computerized device to device 10, an RS-232 port for transmitting serial data between any devices and device 10, and a universal asynchronous receiver/transmitter (UART) or serial-to-parallel and parallel-to-serial converter; (2) using cradle 25 to recharge device 10; and (3) device 10 having a receiving means for receiving a signal from other devices 10 and controlled appliances.

In an analogous art, as explained above in Section 8, Allport's remote control 10 comprises: (a) a housing; (b) an interface disposed in the housing; (c) a plurality of icons on the interface; (d) display 85; (e) clear button 130; (f) USB port 635 and serial ports 645 and 655; (g) RS-232 port 650; (h) CPU 605; (i) a Universal Asynchronous Receiver/Transmitter (UART) 675 for performing parallel-to-serial and serial-to-parallel conversions; (j) control infrared (IR) port 640 for transmitting IR commands to a controlled apparatus; and (k) docking station or electric cradle for recharging remote control 10's batteries. Allport discloses that a new IR command library for the must be loaded into the memory of remote control 10 when a new device is to be controlled by remote control 10 (see Col. 22, lines 19 - 31). If a plurality of IR command libraries is already loaded in remote control 10, the consumer actuates one button on remote control 10, which causes remote control 10 to begin cycling through the series of IR command libraries (see Col. 22, lines 66 - 67 and Col. 23, lines 1 - 2). The cycling comprises selecting a library, sending an IR command associated with the selected library to the device, determining if the device responded to the IR command, and either automatically stopping the cycle if the device communicates back to remote control 10 or continuing on to test the next library in the same manner if the device fails to respond (see Col. 23, lines 3 - 10); thus Allport's remote control 10 has both a transmitting means a for transmitting a signal to and a receiving means for receiving a signal from a controlled device. Furthermore, Allport's remote control 10 includes the option of saving the current settings onto another remote control (see Col. 23, lines 13 - 19). Because Allport's remote control 10 has IrDA port 645 (see Fig. 18) for wireless communication, it is understood that the first remote control 10 sends its current settings to a second remote control 10 via IR signals and that the second remote control 10 is also able to transmit data to the first remote control 10 via IR signals.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wozniak's device 10 as taught by Allport because (1) a USB port is an industry standard port for "plug and play" connection to personal computers and is able to transfer data at a rate of up to 4 megabytes per second (see Allport, Col. 27, lines 53 - 57); (2) a plurality of serial ports, such as an RS-232 port, modem port, or IrDA port, and a UART enables device 10 to connect to a variety of outside sources, such as the Internet, thereby enhancing the flexibility of device 10; (3) a plurality of devices 10 having two-way communication capability enables a first device 10 to send its current settings to a second device 10 for storage, thus creating a backup remote control device with all the desired settings and ensuring that all devices 10 have the identical settings; and (4) an electric cradle for recharging remote control 10's batteries ensures that remote control device 10's batteries are properly charged, thereby improving reliability.

Regarding Claims 2 - 4 and 6, as shown in Fig. 11, Wozniak's remote control device 10 controls and monitors: (a) televisions, VCRs, and stereos, which form an entertainment center; (b) thermostats, which are inherently connected to HVAC systems; (c) household appliances, such as microwave ovens; and (d) security systems. (See Col. 3, lines 23 - 32.)

Regarding Claim 5, Wozniak is silent on device 10 controlling other devices using X10 protocol.

Allport's remote control is able to communicate to other devices through proprietary base stations with X10 (power line communications) or CEBus protocols (see Col. 4, lines 36 - 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote control device 10 of Wozniak as taught by Allport

because Allport states that remote controls obtain more functionality and power by communicating with devices through a proprietary base station, which interact with the devices through X10, CEBus, or RS-232 protocols (see Allport, Col. 2, lines 59 – 67 and Col. 3, lines 1 – 3).

Regarding Claim 10, Wozniak omits teaching that remote control device 10 controls an optical character recognition (OCR) document scanner.

Allport's remote control 10 can be connected to a CD drive and a printer via a docking station (see Col. 28, lines 45 – 50). In addition, Allport reveals that wired connections to a PC or other hardware devices are made through remote control 10's UBS or serial ports (see Col. 28, lines 54 – 56). Here it is understood that an OCS document scanner is one such hardware device.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote control device 10 of Wozniak as taught by Allport because a remote control with the ability to be connected to hardware devices is able to control the hardware device, thus enhancing the remote control's functionality.

Regarding Claims 17 and 23, Wozniak teaches connecting remote control device 10 to a PC via cradle 25, not through a USB port (see Col. 9, lines 3 – 6).

Allport imparts connecting a PC to remote control 10's UBS port 635 (see Col. 27, lines 53 – 55 and Col. 28, lines 26 – 31). By connecting remote control 10 to a PC, Allport states that remote control 10's current settings for all users can be stored on the PC's hard disk or that remote control 10's technical specifications can be accessed (see Col. 23, lines 13 – 19). Here it is understood that remote control 10's technical specifications is accessed by the connected PC and displayed on the PC's monitor. In addition, Allport discloses that remote control 10 can be

connected to the Internet by a PC (see Col. 28, lines 51 – 52). Here it is understood that the PC's keyboard is used to access the desired Internet sites.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote control device 10 of Wozniak as taught by Allport because connecting remote control device 10 to a PC via a USB port enables fast data transfer and enhanced viewing, storage, and keyboard capabilities (see Allport, Col. 29, lines 31 – 42).

Regarding Claim 18, Wozniak's remote control device 10's microprocessor U3 keeps tracks of the time and functions as a timer (see Abstract and Col. 12, lines 61 – 64).

Regarding Claims 20 - 22, Wozniak's remote control device 10 has a transducer module 18 for transmitting and receiving both IR and RF signals, thereby providing roll-over communication capability (see Col. 2, lines 13 – 19 and Col. 7, lines 38 – 59).

Regarding Claim 33, Wozniak's remote control device 10 is able to connect to and communicate with a home computer via cradle 25 (see Col. 9, lines 3 – 6). Wozniak, however, is silent on remote control device 10 accessing files for maintenance and updating.

Allport's remote control 10 has an "updates" screen 60 that allows a user to identify new devices to remote control 10 and an "update system" screen 65 that allows a user to load the required IR commands (see Col. 10, lines 27 – 31). Allport imparts that remote control 10 is able to interact with and gather data or access files from the Internet and other data sources such as a PC (see Col. 5, lines 50 – 59).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote control device 10 of Wozniak as taught by Allport because a remote control device 10 having the ability to access files for maintenance and

updating from a PC enables a user to easily maintain the remote control device's command library and keep it current.

12.   Claims 7 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,918,439 (Wozniak et al.) and U.S. Patent No. 6,104,334 (Allport) as applied to claim 1 above, and further in view of Publication No. US 2001/0025349 A1 (Sharood et al.).

Regarding Claim 7, Wozniak and Allport's remote control 10 does control a security system and room lighting and is able to turn lights on and off or activate/deactivate the security system according to a schedule (see Wozniak, Fig. 11, and Col. 13, lines 28 - 30). Wozniak and Allport, though, neglect to teach that the security system is arranged and configured to open and close windows, lock and unlock doors and windows, and open and close drapes and vents.

In an analogous art, control server 100 of Sharood's building control (BC) system is connected to a plurality of devices that automatically improves personal comfort. Among these devices are automatic blinds or drapes and a zone control system that includes temperature sensors and variable dampers or vents. See Sections [0183] – [0185]. Here it is understood that automatic windows are also incorporated in the enhanced comfort feature of Sharood's BC system.   Sharood's BC system also has a central locking and door access system for locking and unlocking doors and windows (see Sections [0205] – [0210]) and a lighting system for turning lights on and off on a fixed or random schedule (see Sections [0215] – 0217]). Because Sharood imparts that the BC system can be programmed to simulate occupancy and activate energy saving control during the "away" or "vacation" modes, it is understood that the devices associated with the comfort control system, central locking and door access system, and lighting

system form a security system when the BC system is in the "away" or "vacation" modes. See Sections [0143], [0146], [0184], and [0191].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wozniak and Allport's security system as taught by Sharood because a security system that is arranged and configured to open and close windows, lock and unlock doors and windows, and open and close drapes and vents provides a more simulation of an occupied house than a security system that only controls the lights.

Regarding Claim 36, Wozniak and Allport's remote control 10 is unable to control and monitor water.

Sharood's standard touchpad 152 is able to control and monitor all the devices controlled by the BC system, including water. See Sections [0055], [0114], [0143], [0146], [0147], [0157] [0158], and [0180].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wozniak and Allport's remote control 10 as taught by Sharood because a remote control 10 that is able to control and monitor water results in energy savings.

13.   Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,918,439 (Wozniak et al.) and U.S. Patent No. 6,104,334 (Allport) as applied to claim 1 above, and further in view of U.S. Patent No. 5,805,530 (Youngberg).

Regarding Claim 8, Wozniak and Allport's remote control 10 lacks a global positioning system (GPS) receiver.

In an analogous art, Youngberg teaches a master clock 2 or control device that is able to set the time of day and other information in host devices such as televisions, VCRs, kitchen

appliances, and vehicles (see Figs. 2 - 4). As shown in Fig. 4, Youngberg's master clock has a radio frequency (RF)/satellite receiver circuit, which is connected to a processor, for receiving input from an external reference source, such as a GPS satellite or WWV radio (see Col. 4, lines 2 - 13).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wozniak and Allport's remote control 10 as taught by Youngberg because a GPS receiver enables remote control 10 to maintain accurate time of day for timed events (such as turning lights on and off or the activation or deactivation of a security system).

Regarding Claim 9, both Wozniak and Allport teach a remote control that controls a security system (see Wozniak, Col. 3, lines 23 - 31; and Allport, Col. 9, lines 63 - 65). Though Wozniak and Allport omit disclosing that the security system comprises a silent or stealth alarm mode, the Examiner takes Official Notice that security systems with a silent alarm mode are well known. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wozniak and Allport's security system such that is has a silent alarm mode since the Examiner takes Official Notice that security systems with a silent alarm mode are well known and improve capture of a perpetrator by concealing that an alarm has been triggered.

14.   Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,918,439 (Wozniak et al.) and U.S. Patent No. 6,104,334 (Allport) as applied to claim 1 above, and further in view of U.S. Patent No. 6,195,589 (Ketcham).

Regarding Claims 11 and 12, though Wozniak's cradle, as modified by Allport, has a battery charger (see Allport, Col. 28, lines 38 - 45), the cradle lacks a memory and a chargeable battery pack.

In an analogous art, Ketcham discloses a personal data assistant (PDA) 12 having remote control capabilities and the ability to accept scanned bar codes (see Col. 1, lines 32 - 41; Col. 4, lines 47 - 48; and Col. 5, lines 4 - 12). In order to provide such features, Ketcham teaches connecting PDA 12 to an adapter 10 or cradle, as illustrated in Fig. 1 (see Col. 1, lines 42 - 56). Per Ketcham, adapter 10's circuitry, as shown in Fig. 3, includes a microprocessor 38, which performs the operations as selected by control buttons 42 (see Col. 3, lines 36 - 42). In addition, when adapter 10 scans a bar code, it is converted into a digital signal and sent to microprocessor 38 for decoding (see Col. 4, lines 47 - 60). Thus, Ketcham implies that microprocessor 38 has at least one internal memory for storing instructions for microprocessor 38. Ketcham adds that adapter 10's power source 40 comprises the same battery system as used in a conventional PDA, which is understood to be a rechargeable battery pack.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wozniak and Allport's remote control 10 as taught by Ketcham because a cradle with a memory for storage enables the cradle to provide other functionalities, such as bar code scanning.

15.   Claims 15, 19, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,918,439 (Wozniak et al.) and U.S. Patent No. 6,104,334 (Allport) as applied to claim 1 above, and further in view of Publication No. US 202/0149705 A1 (Allen et al.).

Regarding Claims 15, 34, and 35, Wozniak, as modified by Allport, teaches a remote control device 10 having a plurality of ports (or jacks) and a speaker 670 connected to CPU 605

via IO ASIC 630, thereby enabling remote control 10 to alert users of errors or to assist visually impaired users (see Allport, Fig. 18; Col. 27, lines 40 – 61; and Col. 28, lines 11 – 22). Wozniak and Allport, however, are silent on connecting remote control 10's microprocessor to a microphone and a camera. In addition, Wozniak and Allport's remote control device lacks means for wireless or radio audio-visual communications and is unable to support teleconferencing.

In an analogous art, Allen teaches a hybrid communicator/remote control 106 (see Fig. 2) that is able to remotely operate an interactive television system that includes a set top box (STB) and a television set. See Section [0021]. In addition, because it has a digital video camera 245, a speaker 242, and a microphone 244, as depicted in Fig. 2, hybrid communicator/remote control 106 is capable of sending and receiving wireless audio/video signals and providing videoconferencing. See Sections [0022], [0048], and [0051] – [0056]. In Fig. 4, CPU 416 of hybrid communicator/remote control 106 is connected to speaker 242 and a microphone 244 via bus 410 and audio controller 430. See Sections [00388], [0080], and [0085]. Although not shown, it is understood that camera 245 is also connected to CPU 416 in order to enable videoconferencing.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote control of Wozniak and Allport as taught by Allen because connecting remote control 10's microprocessor to a microphone and a camera and providing means for wireless audio-visual communication enables remote control 10 to provide videoconferencing, thus improving the device's functionality.

Regarding Claim 19, Wozniak and Allport's remote control 10 lacks voice-activation and recognition software.

Allen's hybrid communicator/remote control 106 has voice-activation and recognition

software. See Sections [0024], [0096], [0102], and [0103].

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the remote control of Wozniak and Allport as taught by

Allen because voice-activation and recognition software provides hands-free control of remote

control 10, thus making the system easy to use.

16.   Claims 16, 26 – 30, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 4,918,439 (Wozniak et al.) and Publication No. 6,104,334 (Allport) as applied to

claim 1 above, and further in view of U.S. Patent No. 5,917,405 (Joao).

Regarding Claim 16, Wozniak's remote control 10, as modified by Allport, is able to

communicate over local RF intercommunication (see Wozniak, Col. 2, lines 13 – 19). Wozniak

and Allport's remote control 10, however, is unable to communicate over a cellular network, a

satellite system (such as the global positioning system), a weather radio system, and National

Institute of Standards and Technology's (NIST) radio station WWV.

In an analogous art, Joao teaches a control apparatus for vehicles that is used in

conjunction with residential premises (see Abstract and Col. 10, lines 40 – 43). When used in

conjunction with residential premises, Joao's control apparatus is able to control a home

thermostat or environmental control system that is connected to the home HVAC system (see

Col. 11, lines 38 – 47). As shown in Figs. 1 and 15, Joao's system includes a transmitter 2, which

is a remote system (see Col. 18, lines 57 – 58). Joao imparts that transmitter 2 comprises of a

user interface device 2A, a transmitter 2B for transmitting signals selected by a user, a receiver

2C, and a device for providing audio and video indication of system operation and status and

information received by receiver 2C (see Col. 18, lines 41 – 57). Per Joao, transmitter 2 is a

personal communication device that can communicate over an appropriate communications

system operating anywhere in the electromagnetic and radio spectrum, including radio signal,

personal communication service (PCS) or cellular, optical, and satellite systems (see Col. 19,

lines 10 – 20), thereby implying that Joao's transmitter 2 is able to communicate over the global

positioning system, a weather radio system, and National Institute of Standards and

Technology's (NIST) radio station WWV.

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the remote control of Wozniak and Allport as taught by Joao

because a remote control 10 with the ability to communicate over a cellular network, a satellite

system (such as the global positioning system), a weather radio system, and National Institute

of Standards and Technology's (NIST) radio station WWV provides a user the ability to monitor

and control his/her home from any remote location, thereby improving the effectiveness and

convenience of the system (see Joao, Col. 2, lines 64 – 67 and Col. 3, lines 1 – 3 and 50 – 54).

Regarding Claims 26 – 29 and 37, Wozniak and Allport neglect teaching that remote

control 10 is able to control: (1) pet surveillance and monitoring equipment, (2) yard and

greenhouse diagnosis, surveillance, supervision, and maintenance equipment; (3) vehicle

engine start-up and warming equipment; (4) vehicle door locks and vehicle location monitoring

equipment; and (5) swimming pool equipment, such as a heater.

Per Joao, transmitter 2 is able to control apparatus 1500, which is connected, via CPU 4,

to home equipment systems 1515 and home thermostat system 1517 (see Fig. 15). Home

equipment systems 1515 include video recording equipment that are associated with a

transceiver for transmitting video images to the user and for receiving control signals sent by

the owner via transmitter 2 (see Col. 63, lines 66 – 67 and Col. 64, lines 6 – 17). The video

recording devices, according to Joao, is located at any location inside the house so that the

owner or occupant can observe the occupants or anything, such as a pet, located in the house

(see Col. 64, lines 18 – 24). Here it is understood that the video recording devices form a pet

surveillance and monitoring system. Because Joao states home equipment systems 1515 include

devices for controlling and monitoring lawn sprinkler systems, electric fences, pool equipment,

etc. (see Col. 62, lines 62 – 67; Col. 63, lines 1 - 19), it is understood that pool equipment includes

a water heater for the pool and that greenhouse diagnosis, surveillance, supervision, and

maintenance equipment is also part of home equipment systems 1515. Joao's vehicle control

apparatus, as shown in Fig. 1, has a receiver 3 for receiving signals from transmitter 2 (see Col.

19, lines 51 – 60). Upon receiving the appropriate signal from receiver 3, CPU 4 will issue a

signal to vehicle ignition system 7 or vehicle engine start-up and warming equipment, either

disabling or enabling vehicle ignition system 7 (see Col. 21, lines 50 – 59). Transmitter 2 is also

able to control vehicle equipment systems 11, which includes a power door lock system and a

homing and tracking system for indicating the location of the vehicle (see Col. 21, lines 27 – 42

and Col. 22, lines 50 – 65).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the remote control of Wozniak and Allport as taught by Joao

because the ability to conveniently and effectively control a plurality of systems from a remote

location at any time is invaluable to a home and/or vehicle owner (see Joao, Col. 2, lines 64 – 67

and Col. 3, lines 1- 3).

Regarding Claim 30, Wozniak's remote control 10, as modified by Allport, includes the

option of saving or downloading its current settings onto another remote control 10 (see

Wozniak, Col. 23, lines 13 – 19). Because Wozniak and Allport's remote control 10 has IrDA

port 645 (see Fig. 18) for wireless communication, it is understood that the first remote control

10 communicates with the second remote control 10 via IR signals and that the second remote

control 10 is also able to transmit data, such as its current settings, to the first remote control 10

via IR signals. Though Wozniak and Allport's remote control 10 is also able to control/program

a plurality of devices (see Wozniak, Fig. 11), remote control 10 is unable to monitor a plurality

of devices.

Joao's transmitter 2, on the other hand, is able to monitor hot water heaters, garage door

openers, lawn sprinkler systems, electric fences, etc. (see Col. 11, lines 59 – 67 and Col. 12, lines 1

– 5).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the remote control of Wozniak and Allport as taught by Joao

because a plurality of remote controls having the ability to control monitor various devices or

systems enable multiple users to control and monitor their premises from any location and at

any time, thus improving the convenience and efficiency of the system.

17.   Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 4,918,439 (Wozniak et al.) and U.S. Patent No. 6,104,334 (Allport) as applied to claim

1 above, and further in view of U.S. Patent No. 6,264,559 (Lawrence et al.)

Regarding Claims 31 and 32,emote control 10 of Wozniak, as modified by Allport,

comprises: (a) a graphical display 85 having programmable buttons (see Allport, Col. 12, lines

13 – 16); (b) connector 27 or input/output (I/O) port (see Wozniak, Fig. 3 and Col. 7, lines 65 –

68); and (c) software for monitoring and processing received IR signals when in the learning

mode and for transmitting control signals (see Wozniak, Figs. 7a – 7f; Col. 5, lines 47 – 49 and 63

– 68; and Col. 6, lines 13 – 22). Remote control 10 is also able to run additional programs, such as

the one that enables a user to program remote control 10 to monitor the time and emit various control signals at selected times (see Col. 13, lines 28 – 30). Wozniak and Allport omit adding games software to remote control 10. In addition, Wozniak and Allport's remote control 10 lacks a recessed parallel port.

In an analogous art, Lawrence teaches an interactive television system that includes a set top box and a remote control unit with control logic to execute game software instructions stored in a local medium and process input signals received from the input device to play the game software in addition to the normal functions of the remote control unit (see Col. 1, lines 58 – 65). The remote control unit and the set top box may communicate in a number of different ways, and in one embodiment, the set top box and remote control unit communicate within the infrared frequency spectrum. The remote control unit control logic is configured to download game software from the set top box and store the software in a remote control medium (see Col. 2, lines 25 – 34). Referring to Figs. 2 and 3, Lawrence's remote control unit 82 has a recessed bus connector 102 that is configured for a USB or parallel port connector, thereby enabling remote control unit 82 (see Col. 5, lines 40 – 49).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote control of Wozniak and Allport as taught by Lawrence because a remote control 10 with a parallel port, which enables the connection of a gaming controller, and the ability to execute game software, in addition to its normal functions, enhances the overall television viewing experience for the viewer (see Lawrence, Col. 1, lines 64 – 65).

18.   Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No.

4,918,439 (Wozniak et al.) and U.S. Patent No. 6,104,334 (Allport) as applied to claim 39 above,

and further in view of U.S. Patent No. 6,394,359 (Morgan).

Wozniak's device 10, as modified by Allport, is able to control a thermostat. Wozniak

and Allport, however, are silent on the thermostat that includes a transmitting means for

transmitting a signal to and a receiving means for receiving a signal from device 10.

In an analogous art, Morgan teaches a remote control unit 15 that controls a base unit 10

or thermostat (see Abstract).   As shown in Figs. 2 and 4, Morgan's remote control unit 15

comprises: (a) a housing; (b) back light control switch 105, remote temperature control

pushbuttons 120, and remote fan switch 125 forming an interface (see Col. 5, lines 62 – 67 and

Col. 6, lines 1 – 9); (c) display 135 for viewing current settings (see Col. 6, lines 19 – 30); (d)

microprocessor 100; and (d) transceiver module 145 for transmitting data to and receiving data

from base unit 10 (see Col. 6, lines 31 – 37). Morgan's controllable base unit 10 or thermostat, as

shown in Figs. 1 and 3, comprises: (a) a housing; (b) temperature control pushbuttons 40 and

fan control switch 45 forming an interface (see Col. 5, lines 20 – 25); (c) ambient temperature

readout 70 and set-point temperature readout 80 (see Col. 5, lines 37 – 46); (d) microprocessor

35; and (e) transceiver unit 55 for transmitting data to and receiving data from remote control

unit 15 (see Col. 5, lines 28 – 30 and Col. 6, lines 31 – 37).

Therefore, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the thermostat of Wozniak and Allport as taught Morgan

because a thermostat that is to communicate bi-directionally with device 10 enables the user to

determine the difference between the ambient temperature at the thermostat and at the remote

control unit; thus the user can select the desired temperature accordingly (see Morgan, Col. 4, lines 1 – 15).

Conclusion

19.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.   Accordingly, **THIS ACTION IS MADE FINAL.**   See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (703) 305-4086. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY
21 April 2004

BRIAN ZIMMERMAN
PRIMARY EXAMINER